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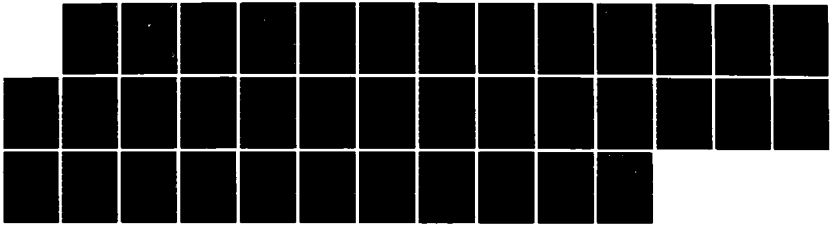

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AIR COMMAND AND STAFF COLLEGE

STUDENT REPORT

RECOMMENDED CHANGES TO TAC STAN/EVAL FORMAL VISIT POLICIES AND PROCEDURES

MAJOR MICHAEL D. NOTLEY 86-1885

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TITLE RECOMMENDED CHANGES TO TAC STAN/EVAL FORMAL VISIT POLICIES AND PROCEDURES

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Present TAC inspection policy requires both an MEI and a Stan/Eval Formal Visit evaluation of the unit Stan/Eval function. The study determines the Stan/Eval program portion of the Formal Visit and the MEI are redundant evaluations. The aircrew performance portion of the Formal Visit is unique and valuable. The study recommends the Formal Visit no longer include the Stan/Eval programs portion as an evaluation area. The aircrew performance portion should be expanded to include flight evaluations for all SEFEs and instructors and be used as the sole basis for determining the Formal Visit unit rating. The MEI would continue unchanged.

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PREFACE

In June 1984, the ADTAC Standardization/Evaluation team concluded the Formal Visit for a unit that came extremely close to earning an overall Outstanding rating for the visit--something the team members had never seen. In fact, the unit was so close that the programs portion of the visit was rated Outstanding. It was later remarked by a member of the unit leadership that the rating was a result of a concentrated effort to reaccomplish every AF Form 8, every Operating Instruction, every piece of paper generated by the Stan/Eval function that could possibly be of interest to the headquarters SEFEs. Upon further examination, this type of preparation for the programs portion of the Formal Visit is not unusual. A trend of this type not only degrades the primary intent of Stan/Eval programs, it dilutes the purpose and value of the Formal Visit. This paper examines the higher headquarters Stan/Eval evaluation process from both an Inspector General and functional staff perspective. It attempts to define an evaluation process which will restore the proper emphasis on administrative details and encourage units to devote primary emphasis on the operational performance factors and combat capability.

Thanks are due to Col A.K. Smith for helping to define the problem. Majors Greg Geesey, Paul Kennedy, and Roger Estes provided invaluable data and information about changes within the Stan/Eval function. Major Barry Morgan provided much needed assistance on the mathematics found in this study. Finally, a heartfelt thank you to Col John M. Cremin, Jr. who has agreed to sponsor this project.

ABOUT THE AUTHOR

Major Michael D. Notley entered the Air Force in June 1971 and attended Undergraduate Pilot Training at Reese AFB, TX. Following graduation, he was assigned back to Reese AFB as an instructor pilot in the T-38. Following rated supplement tours at Eglin AFB, FL and Clear AFS, AK as a Space Surveillance Officer, he received an assignment to Hahn AB, GE flying the F-4E. Returning stateside, he was assigned to Homestead AFB, FL as an instuctor pilot and flight examiner in the F-4D. He recently completed a tour as the ADTAC F-4 flight examiner and Chief of the Support Branch, ADTAC Standardization/Evaluation Division, Langley AFB, VA. He is a 1970 graduate of the University of Oklahoma with a Bachelor of Science Degree in Mathematics. He is presently a student attending Air Command and Staff College.

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REPORT NUMBER 86-1885

AUTHOR(S) MAJOR MICHAEL D. NOTLEY, USAF

TITLE RECOMMENDED CHANGES TO TAC STAN/EVAL FORMAL VISIT POLICIES AND PROCEDURES

Purpose: The Stan/Eval function is one of the most frequently evaluated areas within the unit. It receives scrutiny during both the MEI and Stan/Eval Formal Visit plus other directed staff assistance visits and any required self-assessment. The purpose of this paper is to determine if both the MEI and the Formal Visit evaluations are required to accurately assess the function's capability to fulfill its charter.

Problem: Three different approaches were used to compare the MEI and the Formal Visit in order to establish areas of commonality. First, a search of the appropriate directives was conducted to determine the frequency, purpose, and requirements of each type evaluation. Also, the contention that the Formal Visit is a more thorough evaluation of the Stan/Eval function than the MEI was studied, and the rating system used by each type evaluation was compared. The second approach involved a mathematical analysis of the MEI and Formal Visit Stan/Eval programs ratings for 1984 and the first half of 1985, and probability functions were derived showing each evaluation team's rating tendencies. This was done to show the effect of differing evaluation philosophies on the ratings of various units' Stan/Eval function. Finally, a survey of randomly chosen Chiefs of Stan/Eval was conducted to determine how they prepared for past evaluations.

CONTINUED

Conclusions: The Stan/Eval programs portion of the Formal Visit and the MEI of the Stan/Eval function compare quite favorably. They evaluate the same areas, use the same checklist, and essentially have the same purpose of evaluating the management aspects of the Stan/Eval area. Probability functions that describe the rating tendencies of the evaluation teams are nearly coincidental; and, within limits, both the MEI and the Formal Visit award the same ratings when evaluating similar situations. Although the argument supporting the thoroughness of the Formal Visit has validity, the ability of the MEI to accurately assess the function's true rating supports the argument that the IG's sampling approach is good enough. One area of the Formal Visit, aircrew performance, has no close counterpart in the MEI, and retains its value because of the unique way it measures a unit's ability to perform mission tasking.

Survey results indicate units prepare for the MEI and the Formal Visit in much the same way. The preponderance of preparation efforts are centered in the Stan/Eval programs or "paperwork" portion. A significant number of units go to great lengths to ensure the programs are inspection ready. Conversely, relatively little effort is spent preparing for the aircew performance portion which constitutes the "bigger half" of the Formal Visit overall rating. This misplaced effort is the result of overemphasis on the Stan/Eval programs caused by HQ TAC requiring double inspection of the function.

Recommendations:

1) Eliminate the Stan/Eval programs as evaluation items during the Formal Visit.

2) Expand the aircrew performance portion of the Formal Visit to require evaluations for each SEFE and instructor within the unit, and base the overall unit rating solely on aircrew performance.

3) Informal visits by headquarters SEFEs should include spot checks of unit programs to ensure quality remains high.

4) Leave the MEI unchanged.

Chapter One

INTRODUCTION

The Standardization/Evaluation (Stan/Eval) function in the flying unit is chartered with providing "commanders with meaningful indicators to show the effectiveness of training that pertains to command mission and aircrew flying duties." (9:41) Tactical Air Command has further refined this charter "to provide commanders with meaningful indicators which reflect aircrew training and aircrew ability to perform the unit mission." (5:2-1) The key word in both charter statements is training. Within TAC, training, in one of its several forms, is a continual process. Those forms include initial qualification training, mission qualification training, and continuation training. (4:1-3) Stan/Eval's function is to measure the quality of output of each phase of training. Through the measuring devices of individual aircrew evaluations and collective trend analysis programs, Stan/Eval provides the commander the assessment he needs to determine aircrew capability to perform the unit mission and, hence, the effectiveness of the respective training program.

The key role Stan/Eval plays within the unit is reflected in the scrutiny the function receives during formal evaluations. It is inspected during the Management Effectiveness Inspections (MEI) conducted by the Inspector General (IG). The function is also evaluated during Stan/Eval Formal Visits conducted by the responsible headquarters' Stan/Eval team. It receives further headquarters scrutiny during informal visits and staff assistance visits. The function provides a continual self-assessment through the monitoring of flight examiner (SEFE) objectivity by the Chief of Stan/Eval and the use of self-inspection checklists. In addition, the Stan/Eval Review Board meets routinely to analyze the results of unit efforts as measured by the Stan/Eval function. In all, Stan/Eval is one of the most critically evaluated functions within the unit.

The purpose of this paper is to determine if both MEI and Formal Visit evaluations are required to accurately assess the Stan/Eval function's capability to measure the quality of output of the unit training programs. To begin, Chapter 2 presents a comparison of MEI and Formal Visit evaluation frequencies, goals, and evaluation requirements to determine

areas of commonality and divergence. Chapter 3 will include the actual results for both MEI and Formal Visit evaluations for the year and a half period beginning in January 1984. Chapter 4 documents the results of interviews with unit Chiefs of Stan/Eval conducted to support the purpose statement. Finally, Chapter 5 will conclude with a summary of lessons learned and recommendations for future evaluations of the Stan/Eval function.

Chapter Two

A COMPARISON OF THE MEI AND THE FORMAL VISIT

Before starting a comparative analysis of the MEI and the Formal Visit, it would be appropriate to discuss the nature of each evaluation. The MEI is called an inspection because it is administered by the Inspector General. The Formal Visit cannot be called an inspection because it is administered by the Stan/Eval Division, a subfunction of the Operations Directorate at the MAJCOM and Numbered Air Force level. The MEI evaluates each functional area within a flying unit, including Stan/Eval, and combines those ratings to derive an overall unit effectiveness rating. The Formal Visit presumably evaluates only the Stan/Eval function within the unit. Indirectly, however, other functional areas are evaluated, especially during the aircrew performance portion of the visit. Two areas, aircrew training and weapons and tactics, often have a major impact on the overall unit rating. In at least one case, a poor showing by the unit training function during a Formal Visit contributed to an overall marginal rating and a subsequent Stan/Eval Revisit.(10:8) Regardless of whether they're called inspections or visits, both are major evaluations for the unit. The results of each are briefed at the command level, and extensive reports are published for command viewing.

EVALUATION FREQUENCY

The first step in the comparison process concerns the frequency of evaluation for the MEI and the Formal Visit. There are two categories of units to be considered: TAC units and TAC-gained units. TAC-gained units include Air Reserve Force(ARF) units of the Air National Guard and Air Force Reserve. For TAC units who do not receive an Operational Readiness Inspection(ORI) such as a Tactical Training Wing, the MEI occurs each 18 months. All other TAC units receive an MEI each 24 months. TAC-gained units can expect an MEI every 30-36 months.(7:2) On the other hand, the Formal Visit occurs each 20 months for all TAC units, training or otherwise.(5:2-2) For TAC-gained units, a recent change to TACR 60-2, Vol I, allows the Formal Visit to run concurrent with the MEI each 36 months. The typical TAC unit can expect a major evaluation every 10-12 months, not including the ORI if applicable. Although the evaluation frequency for the TAC-gained units has recently been

extended, the rationale for the change may equally apply to all TAC units.

EVALUATION PURPOSE

The next step in the comparison process involves the purpose for each of the two evaluations. The MEI "should evaluate each functional area for its capability to accomplish assigned responsibilities and tasks."(8:12-1) It does this by focusing "on economical management of resources, unit management processes, compliance with current applicable directives, and MAJCOM designated special inspection items."(8:12-1) The congruency in these purpose statements is the emphasis on the management aspects of the functional area to be inspected, in this case the Stan/Eval function. The Formal Visit, on the other hand, stresses two main areas: the Stan/Eval program and the unit aircrew performance. Formal Visit goals, listed in TACR 60-2, Vol I, include:

1) Determine the effectiveness of the Stan/Eval programs.

2) Assess the capability of the Chief of Stan/Eval, flight examiners, instructors, and unit aircrew members through flight evaluations and written evaluations to evaluate, instruct and perform the unit's assigned tasking.

3) Review unit Stan/Eval administrative procedures and records to include all publications and written directives pertaining to flying operations.

4) Identify operational or training factors adversely affecting aircrew capability to accomplish assigned mission and recommend corrective action as required.

5) Verify aircrew compliance with approved operational procedures.

It is apparent from Objectives 1,3,4, and 5 that the Formal Visit has a great deal in common with the MEI, at least in purpose. All four goals stress the management of the Stan/Eval function. However, arguments can be made that the Formal Visit best determines the management effectiveness and quality of the administrative portion of the Stan/Eval function. This argument will be addressed following a comparison of evaluation requirements.

AIRCREW PERFORMANCE

Before conducting a comparison of evaluation requirements, a main area of the Formal Visit not yet considered is the aircrew performance portion of the evaluation. A major portion of the Formal Visit consists of measuring the quality of aircrew performance during flight evaluations, emergency procedures evaluations, and written examinations. Performance standards and evaluation criteria are detailed by regulation. The overall rating for aircrew performance is a subjective summation of the unit's performance of objective tasks and is a significant factor in the unit's overall Formal Visit rating. Likewise, the MEI measures aircrew performance but in a more indirect manner. Although no flight evaluations(check rides) are flown, mission evaluations are. Regulation directs that only Stan/Eval flight examiners(SEFEs) may conduct flight evaluations, and generally speaking, there are no SEFEs on the IG team.(5:1-1) Flight evaluations differ from mission evaluations in both scope and depth. The mission evaluation is used to assess the appropriateness and adequacy of unit training missions in preparing aircrews for combat tasks. A necessary fallout from this type evaluation is an assessment of the aircew member's ability to safely conduct training. This assessment is based more on the inspector's overall impression rather than on any specific mission event. Flight evaluations, on the other hand, are task oriented, and objective performance criteria is listed for each event the aircrew might perform. As an example, a flight evaluation would include specific events such as takeoff, navigation, instrument approach, weapons employment, etc., and assign them individual grades according to established criteria.(6:5-1) Conversely, the mission evaluation might look at the same events, and yet the only criteria it has to meet is, "Does the aircraft commander maintain positive control through all phases of flight?"(2:1)

The Formal Visit will also fly flight evaluations on a higher percentage of unit aircrew members. First Air Force (previously ADTAC) Stan/Eval used a goal of 40 percent of available aircrews. The typical MEI would only fly a third as much. This is not to say that mission evaluations do not fulfill IG requirements for evaluating the management of unit flying activities. They most assuredly do; however, mission evaluations do not measure the quality of aircrew performance to the depth required of a Formal Visit. Therefore, because the aircrew performance portion of the Formal Visit and the mission evaluation of the MEI do not favorably compare, the remainder of this analysis will deal primarily with the administrative portion of the Stan/Eval function, the Stan/Eval program.

EVALUATION CHECKLISTS

In comparing evaluation requirements, it will be necessary to look both at the checklist used by each type of evaluation and how that checklist is applied. The checklist requirements of the MEI and the Formal Visit are virtually the same. This is not surprising since both are prepared by Stan/Eval people and use the same regulations as source material. The TACR 60-2 describes the set-up, operation, and evaluation of the unit Stan/Eval function, and it breaks the program into 11 subareas. These subareas are the framework for both of the evaluation checklists. The MEI checklist, TACR 123-42, is prepared by TAC Stan/Eval(HQ TAC/DOV). Each Numbered Air Force Stan/Eval team prepares its own Formal Visit checklist, but they differ only in format. All the checklists are structured the same with appropriate evaluation items listed under each of the 11 subareas.The MEI subareas differ from the ones listed in the Stan/Eval checklists, but the difference is small. It appears that this difference is because the Formal Visit checklists have been updated to reflect the most recent changes to TACR 60-2 while TACR 123-42 has not been updated since 1983. Since the MEI checklist matches the old version of TACR 60-2, it is assumed that, following revision, TACR 123-42 will again match the revised regulation. Other than this slight difference, the checklists are all virtually the same and quite interchangeable among the various evaluation teams.

DEPTH OF EVALUATION

While the checklists may be the same, arguments can be made that the primary difference between the two evaluations deals with how that checklist is actually applied. Principally, the Formal Visit provides a more in-depth look at the Stan/Eval function and hence provides a more accurate assessment. This argument is based on two suppositions. First, the MEI, because it must inspect each functional area within the unit, is limited in the time that can be devoted to the Stan/Eval function. Routinely, the Formal Visit devotes a three to four day period to evaluate the Stan/Eval program. The IG normally allows half a day unless major problems develop that require a more complete look. While the Formal Visit might use two or three evaluators during this time, the MEI normally uses only one.

The second supposition concludes that the MEI evaluates the function by looking at the 11 subareas as they appear during the evaluation. They take a "snapshot" look. Conversely, the Formal Visit evaluates those 11 subareas by reviewing their performance history since the last Formal Visit. By way of example, one of the 11 subareas in the Stan/Eval program is titled "Flight Evaluation Folders(FEF)/ Preparation and Control

of AF Forms 8."(5:2-3) The requirement for FEFs and AF Forms 8 is established by AFR 60-1. These items are permanent documents maintained on each aircrew member describing their qualification history and performance on required flight evaluations. Command documentation procedures are listed in TACR 60-2 and are included as evaluation items on both the MEI and Formal Visit checklists. Evaluators for the Formal Visit will generally look at every FEF and every AF Form 8 generated since the last Formal Visit. The MEI generally only looks at a small sample of these items.

Obviously, both suppositions have merit. More inspectors devoting more time looking at the total sum of the Stan/Eval function should provide a more in-depth look than the MEI can provide. But the question hinges on whether the MEI look is good enough to make an accurate assessment of the program. Interviews with IG personnel indicate they feel the depth of evaluation is sufficient, and empirical data will be introduced in the next chapter to document the accuracy of the MEI assessment.

THE RATING SYSTEM

The final area that requires comparison is the rating system used during the two evaluations. Both have five tier grading systems with the ratings ranging from unsatisfactory to outstanding. Because more than 90 percent of Stan/Eval function ratings fall into the satisfactory to excellent range, this analysis will concentrate on those rating definitions. Key phrases of each definition are included below.

MEI RATING DEFINITIONS

Excellent- 90% of HQ TAC inspection guide items must be accomplished in a superior manner. Management of...programs...relatively free of deficiencies.(8:12-1)

Satisfactory- 75% of HQ TAC inspection guide items accomplished in a competent manner. Management...is efficient. Minor deficiencies may exist, but do not impede or limit mission accomplishment.(8:12-1)

FORMAL VISIT DEFINITIONS

Excellent- Procedures in effect exceeded requirements and enhanced overall effectiveness.(5:2-5)

Satisfactory- Performance...meets mission requirements. ...programs are efficiently managed. Minor deficiencies may exist, however they do not impede or limit mission accomplishment.(5:2-5)

The percentage factors given in the MEI definitions stick out as the main difference between the two rating systems. Those percentages serve only as a guide. The judgement of the inspector is the overriding factor.(8:12-1) Regardless, the satisfactory rating definitions display enough similarities to be consistent. The excellent ratings diverge somewhat, especially in the phrases "relatively free of deficiencies" and "exceeded requirements." If a requirement of the program is not met, then a deficiency exists by the Formal Visit definition. It seems that an excellent rating earned through the Formal Visit criteria would qualify as an excellent under the MEI. The converse does not necessarily hold. A unit achieving only 90 percent of program requirements could not be awarded an excellent by the Formal Visit even if the deficiencies do not detract from program effectiveness. The point of the discussion is not which rating system is best. They both serve the intended purpose. The point is the MEI definition of excellent is broader and should encompass a higher percentage of units when compared to the Formal Visit. This fact will be borne out in the next chapter.

EVALUATION SUMMARY

Comparison of the two evaluations has shown several things. First, regardless of the name, both evaluations are inspections. Second, the frequency of these evaluations forces units to prepare for them at a rate better than one per year. Third, both evaluations are remarkably similar in the evaluation of the Stan/Eval program, although distinct differences are apparent in the aircrew performance portion. Fourth, inspection checklists are nearly identical; and while arguments can be made that the Formal Visit provides a more in-depth evaluation, the MEI evaluation may prove to be sufficient. Finally, subtle differencies exist in the rating systems of the two evaluations. The satisfactory ratings are consistent between the two, but differences in the excellent definition actually provide the MEI a wider range of possibilities. The next chapter will deal with an empirical evaluation of actual MEI and Formal Visit results.

Chapter Three

STAN/EVAL PROGRAM COMPARATIVE ANALYSIS

To conduct a comparative analysis, the actual MEI ratings for the Stan/Eval function and the Stan/Eval program portion of the Formal Visit ratings were compared. Data from CY 1984 and through second quarter of CY 1985 was used. The data is presented in tabular form in figure 1.

FORMAL VISIT PROGRAM RATING vs. MEI RATING

RATING	UNSAT	MAR	SAT	EXC	OUT	TOTAL
Formal Visit	0	3	49	43	4	99
MEI	0	2	20	37	4	63

Figure 1.Rating Distribution.

The differences in the listed totals are due to timing variances in the respective evaluations. Data from CY 1983 and earlier was discarded because it was incomplete. The size of the listed sample does not include each TAC unit, but it is sufficiently large to offer opportunities for analysis.

To graphically display this data, the Gaussian or Normal distribution function was chosen.(1:304) The function, highlighted in Figure 2, required that numerical values be assigned to the rating scheme used by the evaluation teams. This was arbitrarily chosen to be unsatisfactory=1, marginal=2, satisfactory=3, excellent=4, and outstanding=5.

GAUSSIAN DISTRIBUTION FUNCTION

$$P(x) = \frac{1}{\sqrt{2\pi}\,\sigma} e^{-\frac{1}{2}\left[\frac{x-\mu}{\sigma}\right]^2}$$

Figure 2. Distribution Function.

This function, or the probability that rating X will occur, defines the normal distribution curve that best fits the actual data from Figure 1. The mean(μ) and the standard deviation(σ) can also be calculated to aid in the analysis. To fit this data to a curve, the least squares method was used.(1:134) Although it is beyond the scope of this paper to provide a mathematical step by step derivation, the information presented in Figure 3 was calculated from the raw data listed in Figure 1. The IG subscript applies to MEI results. The DOV subscript applies to Formal Visit Stan/Eval program ratings.

MEAN, STANDARD DEVIATION, AND PROBABILITY FUNCTIONS

$\mu_{IG}=3.619$ $\qquad$ $\mu_{DOV}=3.528$

$\sigma_{IG}=0.665$ $\qquad$ $\sigma_{DOV}=0.622$

$$P_{IG}(x)=37.794\, e^{-\frac{1}{2}\left[\frac{x-3.619}{.665}\right]^2} \qquad P_{DOV}(x)=63.497\, e^{-\frac{1}{2}\left[\frac{x-3.528}{.622}\right]^2}$$

Figure 3. Calculation results.

An overlay of each distribution curve is included with a step function graph of the evaluation results listed in figure 4.

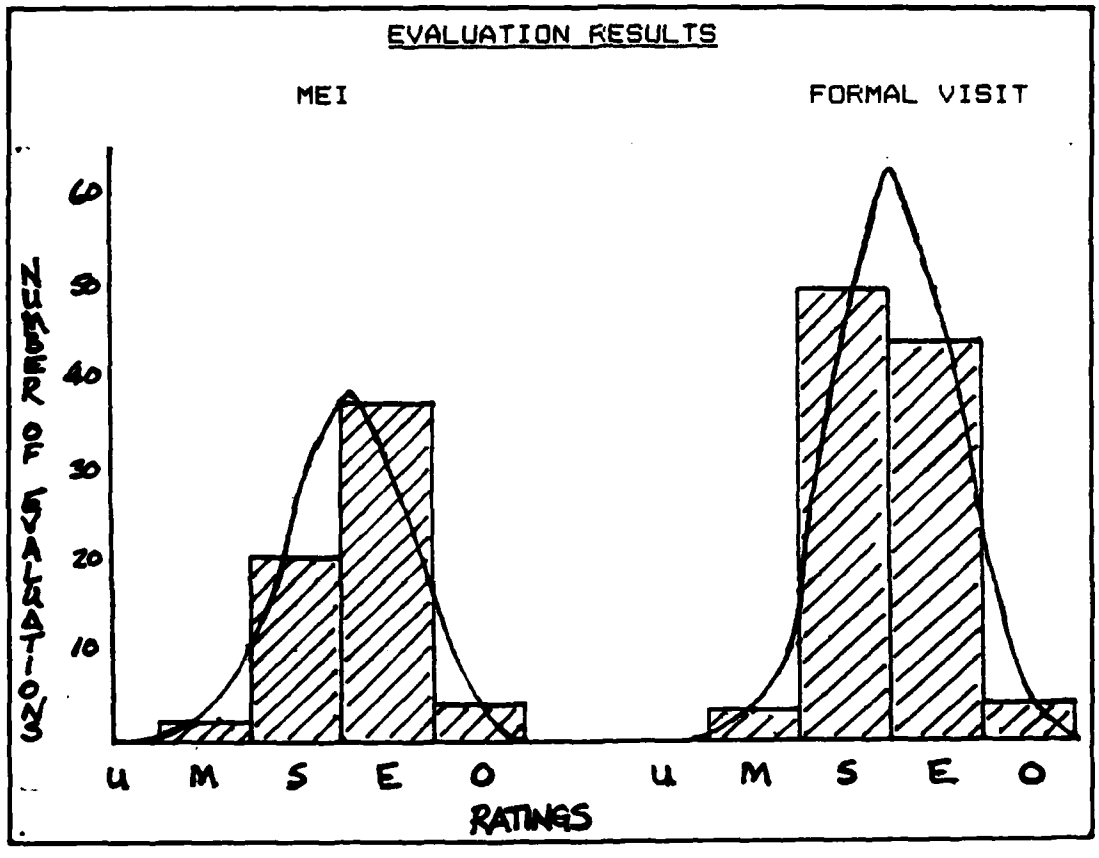

Figure 4. Probability Function Overlays.

The resultant visible difference in the respective curves is due to the unequal number of evaluations given. In order to give a better visual representation of the rating probability curves, it was necessary to normalize the curves. The normalization only adjusts the data to equalize the sample size. In other words, the shape of the function will not change, but the area under the curves will be adjusted. This was done by establishing a ratio for the maximum points of the two curves. The MEI data was arbitrarily adjusted; however, the Formal Visit data could be adjusted simply by using the inverse of the normalization factor. That factor equals 63.497 divided by 37.794 or 1.68.

The normalized curves are presented in figure 5.

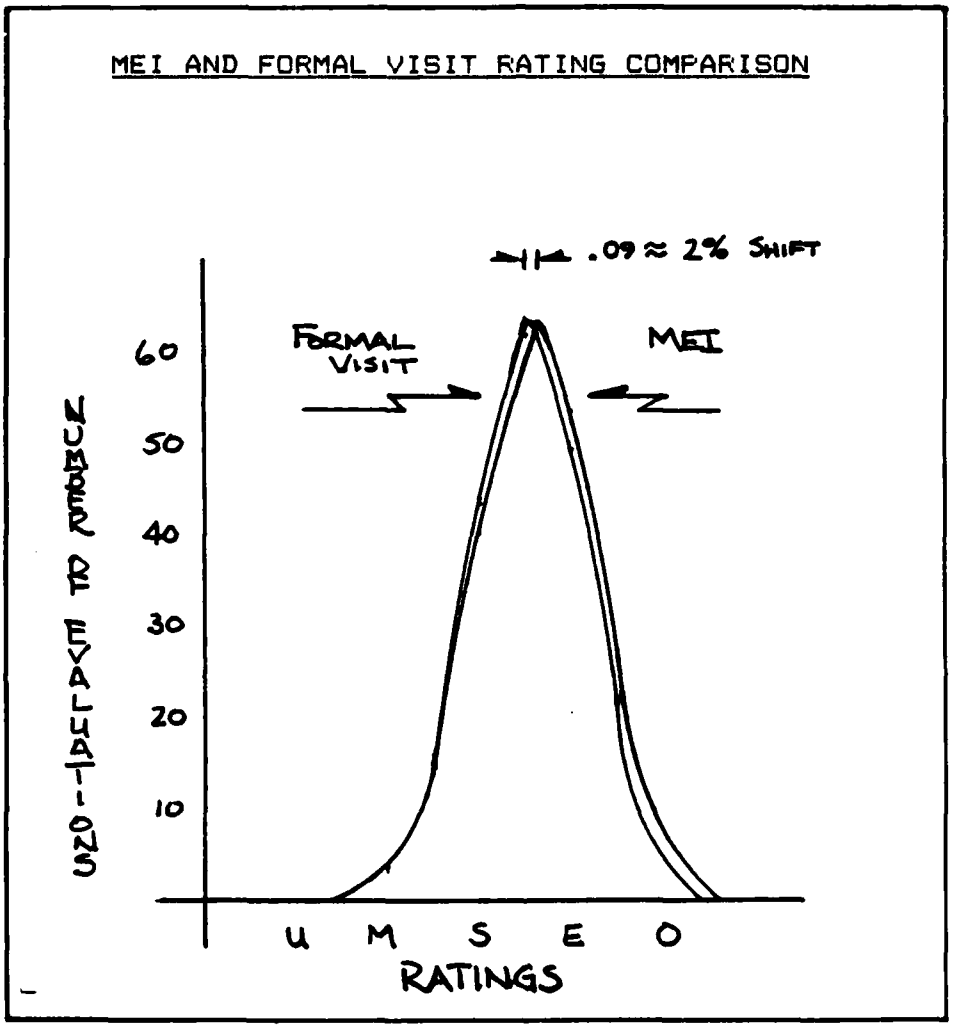

Figure 5. Graphic Comparison.

The graphic results of this analysis point out the remarkable degree of consistency between the two evaluation teams. The average rating for each team is in the"high sat" region with the MEI slightly higher as expected. As stated earlier, this two percent shift to the right is the result of a broader definition of excellent rather than a tendency towards leniency. This difference is minimized even further when it is considered that 95 percent of the possible ratings should occur within two standard deviations (actually 1.96σ) of the mean

point of each curve. In this case, the ranges for both evaluations coincide and include all possible ratings from satisfactory to outstanding.

One last area requiring examination is a direct comparison of each evaluation team's ability to arrive at any one unit's true Stan/Eval program rating. To properly compare their rating abilities, it would be necessary to conduct simultaneous MEI and Formal Visit evaluations of the same Stan/Eval function. This not being possible, an alternative method was chosen. This method uses the previously listed data but only for units that received both an MEI and a Formal Visit during the 18 month time period. Data is included in figure 6.

RATING BREAKOUT FOR UNITS RECEIVING BOTH A FORMAL VISIT AND AN MEI

Rating	Unsat	Mar	Sat	Exc	Out	Total
Stan/Eval Program	0	2	28	19	2	51
MEI	0	2	18	29	2	51

Figure 6. Rating Distribution.

Although the data appears to be weighted more towards excellent for the MEI, it is a reasonable fit to the probability functions listed earlier. It would be convenient if the ratings matched one for one between the evaluation teams. This would greatly simplify the task of showing rating consistency between the teams. Such is not the case. Of the 51 units, only 27 received the same rating on the MEI as on the Formal Visit Stan/Eval program rating. But because of the factors that cannot be held constant, the statistical validity of this simple ratio as an indicator of relative rating ability is questionable. Factors such as the learning process that takes place between evaluations or personnel changes within the unit command structure or Stan/Eval function itself can affect the rating. Theoretically, the more closely spaced the evaluations are, the greater likelihood of them seeing the "same" program. However, twelve units each had the MEI and the Formal Visit within a three month time frame. Seven of the 12

improved by one rating from one evaluation to the next. Is this a rating inconsistency between the two evaluation teams or the result of the learning process that takes place following an evaluation? One would think the latter choice is the most likely case; but, statistically, it can't be proven. Therefore, a new test was needed to determine rating consistency between the two teams.

The test chosen to determine consistency includes two criteria. First, the ratings for any particular unit should fall within some range of each other. In other words, it would be unlikely if there were a drastic change in the program from one evaluation to the next. The range chosen for this criteria was + or - one rating. Statistically, that is a rather large range, but it is the smallest measurable unit within the present rating system. The second criteria establishes that in no case would one evaluation team rate a unit satisfactory or better and the next evaluation team find the unit less than satisfactory. It would be questionable if one evaluation team rated a unit Stan/Eval program satisfactory and three months later the other team found the same unit marginal or worse. Although these criteria may not constitute proof that the teams are consistent in their ability to arrive at the same rating when confronted by similar situations, these criteria do offer a much more sound basis for analysis than the simple statistical ratio.

Results of the analysis were encouraging. Of the 51 units evaluated, 49 met the first criteria for a ratio of 96 percent. The two exceptions require examination and will be discussed below, but the high percentage is an indication of consistency. The second criteria was satisfied even better as there were no "failures." However, there were four cases where one evaluation team found the program marginal and the other team would find the program satisfactory or better. Although, it is reasonable to expect a unit to improve following a marginal rating, two of these four cases included units that made a remarkable recovery by improving from a marginal to an excellent in only six months. These were the only exceptions to the first criteria. Ignoring the possibility that the ratings actually reflect the true rating for the unit's Stan/Eval function at the time of the evaluation, any inconsistency between the teams would show up in these examples. These examples constitute the "worst case." In the first example, the Formal Visit found unit A's Stan/Eval program marginal in June 1984. By December, the MEI found the program had improved to excellent. In the second example, the MEI rated unit B's Stan/Eval function marginal while six months later the Formal Visit rated the program portion excellent. If any inconsistency exists, it appears the evaluation teams are at least equally inconsistent. More likely, the ratings are in fact correct, and the evaluation teams are highly consistent in reaching the same conclusion

when faced with similar situations.

SUMMARY

In a comparison of MEI ratings with Formal Visit Stan/Eval program ratings, empirical data shows a remarkable degree of consistency between the two teams. Probability functions calculated from actual unit ratings show nearly identical tendencies to award any particular rating. Despite limitations that hinder statistical analysis, the data also suggests that both teams are equally capable of measuring the true rating of any particular unit's Stan/Eval program. Taking this supposition one step further, this analysis concludes that either evaluation team is capable of providing the true rating of a unit's Stan/Eval program. Interviews were conducted with a number of unit Chiefs of Stan/Eval who had recently undergone the scrutiny of these evaluations. The results of those interviews are included in the next chapter.

Chapter Four

INTERVIEW SUMMARY

In an effort to determine typical evaluation preparation requirements for the Formal Visit, informal telephonic interviews were conducted with a cross section of command unit Chiefs of Stan/Eval. Chosen at random by a representative of HQ TAC/DOV, the sample included 11 units from the active, Air National Guard and Air Force Reserve components. Selection was based solely on results of the unit's last Formal Visit Stan/Eval program rating. Units from each of the three Numbered Air Forces that make up TAC were included in the sample as was one direct reporting unit. Most of the units were operational although three training units were included to fill the sample population. Overall, it was a fair representation of the parent population described in chapter 3.

The interview questions were designed to determine typical evaluation preparation requirements. They also allowed each respondent to comment on any aspect of the evaluation process. In order to assure complete objectivity, they were promised anonymity. Overall, every Chief of Stan/Eval was very cooperative, and the answers were quite candid. The questions included:

1) What rating did your Stan/Eval program receive on the last Formal Visit?

2) What did the MEI rate it?

3) Do you consider the Formal Visit an inspection?

4) How much time did your unit devote to preparing for the administrative portion of the Stan/Eval Formal Visit?

5) The aircrew performance portion?

6) Did you do anything different for the MEI?

7) Comments?

WHAT WAS YOUR STAN/EVAL PROGRAM RATING ON THE LAST FORMAL VISIT? MEI?

The responses to these questions are presented in tabular form and included only to indicate the sample taken of the parent population listed previously.

Unit	1	2	3	4	5	6	7	8	9	10	11
Formal Visit Stan/Eval Program Rating	E	E	S	O	E	E	S	E	E	E	S
MEI Stan/Eval Rating	E	E	S	O	O	E	S	E	S	E	S

Figure 7. Question Response.

DO YOU CONSIDER THE FORMAL VISIT AN INSPECTION?

The answers to this question supported an earlier contention that the Formal Visit is an inspection in every way but name. All eleven responses indicate the Formal Visit is definitely treated like an inspection by the units. The most colorful answer said, "calling it a visit is bull. People can get fired." However, several answers indicated the units recognized the differences between the two evaluations. "The Formal Visit is more rigorous than any MEI." It "serves a good function" by keeping the unit "exposed to a spotlight" and "keeps aircrew performance up." Another respondent indicated "the Formal Visit looks at the whole unit for one week of flying. The MEI is general perceptions only. They both look at the same paperwork--sometimes in the same detail." It is clear from their responses the units consider the Formal Visit an inspection. How much effort the unit expends in preparation for that inspection is the subject of the next question.

HOW MUCH TIME DID YOUR UNIT DEVOTE TO PREPARING FOR THE ADMINISTRATIVE PORTION OF THE STAN/EVAL FORMAL VISIT?

The responses to this question were varied, and no general pattern developed between time of preparation and the resultant program rating from the Formal Visit. One unit who is "75 percent inspection ready all the time" spent less than a week preparing for the evaluation. The Chief of Stan/Eval took one day to proofread all the AF Forms 8, "Certificate of Aircrew Qualification," that had been generated since the last Formal Visit and correct a few minor errors. The unit was awarded an excellent on their Stan/Eval program. Another unit spent three months preparing for the inspection. They brought in outside help and put in some 70 hour weeks for the last month. They had to correct roughly 90 percent of AF Forms 8 generated since the last Formal Visit. The unit was also rated excellent on the Stan/Eval program part of the inspection. Whether the unit prepared for the inspection throughout the year by keeping the program in inspection order or made a mad rush at the end, the rewards appear to be the same.

Although there were varied responses to the question, most units put in a significant effort preparing their Stan/Eval programs just prior to the evaluation. Typical preparation times for these units ran from one to three months prior to the Formal Visit. Responses such as "fairly massive effort," "rewrote lots of things" and "brought in two extra helpers" were typical. While it is impossible to determine how much that effort paid off in the form of better ratings, five of the seven units who put in this significant effort had Stan/Eval programs rated excellent. Since the first goal of the Formal Visit is to determine the effectiveness of the Stan/Eval programs, it would be interesting to know if these five units are really excellent or are their ratings a result of that "fairly massive effort." Arguments were given earlier concerning the depth of evaluation. The implication was that the Formal Visit gave a more accurate picture because it looked at the unit's performance history since the last Formal Visit rather than just taking a "snapshot" such as the IG might do. If, however, the evaluation teams are looking at recently prepared Stan/Eval programs, the depth of evaluation question becomes a moot point because they are not necessarily the actual working programs.

While these seven units put in special efforts in preparing the Stan/Eval program for the Formal Visit, the other four did quite the opposite. Very little pre-inspection preparation was conducted by any of the units. Special efforts ranged from "less than a week" to "not much." In fact, one unit only had to "come up with a sales pitch." The units all received program ratings of excellent or better. Why were they able to garner high ratings without making a pre-inspection

"massive effort"? Three of the four units felt the secret lay in keeping the programs functioning all the time. Inspection preparation then became a matter of only "fine tuning existing programs." Putting in the effort year-round, rather than a pre-inspection effort, is obviously the desired method of preparing. Not only is the pre-inspection preparation greatly simplified, but the unit gets the full benefit of Stan/Eval programs that are, without a doubt, superior.

HOW MUCH EFFORT WAS EXPENDED PREPARING FOR THE AIRCREW PERFORMANCE PORTION OF THE FORMAL VISIT?

Preparation for the aircrew performance portion of the Formal Visit consisted almost entirely in getting unit aircrews ready for the testing portion of the evaluation. It involved study sessions and practice tests starting three to six months prior to the Formal Visit. Preparation for the flight evaluations was generally "business as usual" for most of the units. Two units did try to fly training mission profiles that simulated the type mission expected to be flown during the evaluation, and another unit made special efforts to improve mission briefings. The one unit that went so far as to fly practice checkride profiles with the expected examinees could only do so because it was a small unit and had a limited mission. Otherwise, preparation for the aircrew performance half of the Formal Visit was limited to aircrew testing.

DID YOU DO ANYTHING DIFFERENT FOR THE MEI?

The units prepared for the MEI in much the same manner they prepared for the Stan/Eval program portion of the Formal Visit. Although, from their answers, it appears the MEI is less intense than the Formal Visit. Several units commented that since the MEI came on the heels of the Formal Visit, preparation consisted only of correcting any deficiencies found during the Formal Visit. Several also commented that the MEI was less detailed than the Formal Visit and they only needed to update the programs for any changes since the inspection. One unit did put in extra effort preparing the function's files to ensure compliance with the appropriate administrative directives--something the unit felt was unnecessary for the Formal Visit. On the whole though, preparation for the MEI was the same as for the Stan/Eval program portion of the Formal Visit.

COMMENTS?

Before summarizing this chapter, one area came up in nearly one third of the Chiefs of Stan/Eval comments. There was a perception that evaluation ratings were based more on how well those programs were presented to evaluators than on their true substance. In fact, one unit felt it had raised its rating by one, in part, by doing a masterful job at "selling" the programs. Obviously, this salesmanship is to be expected as the units strive for the highest possible ratings. There is no evidence to indicate that salesmanship did any more than get the inspection off to a good start. However, the number of units that had this impression was statistically significant, and evaluation teams should be reminded that salesmanship will occur but should not affect the ratings.

SUMMARY

The purpose of this survey was to build a picture of how the typical unit Stan/Eval function prepares for a major evaluation like the Formal Visit or MEI. This picture is important because it tells the evaluation teams how they affect a unit when they come to inspect. Ideally, the unit's Stan/Eval function operates as intended by the regulation all the time. The Formal Visit would then only have to look at Stan/Eval programs, rate them, and then depart--having only minimum impact on the unit's normal training routine. Such is not the case with most of the units. The inspection teams actually see specially prepared programs that have received much recent attention. The units who were interviewed probably deserved the ratings they received. There is no evidence to the contrary. But the fact remains, the majority of the units put in a significant effort preparing their Stan/Eval programs for inspection, both by Formal Visit and MEI. Conversely, little extra effort, other than testing preparation, was made for the aircrew performance portion of the Formal Visit. If aircrew performance constitutes the "biggest half" of the Formal Visit unit rating, it would appear these units are putting their emphasis in the wrong place. The next chapter deals with this perception and offers suggestions on how it might be changed.

Chapter Five

LESSONS LEARNED AND RECOMMENDATIONS

In the previous chapters, arguments have been presented that compare the Stan/Eval program portion of the Formal Visit with the MEI of the Stan/Eval function. Those arguments have shown that the two evaluations compare quite favorably. They both stress the managerial aspects of the function and the resultant administrative programs and practices. They use essentially the same inspection checklist. Probability functions that describe each inspection team's tendency to award any particular rating are nearly coincidental. The data also implies that each team, faced with the same situation, would award the same rating. In other words, both teams are equally capable of evaluating the Stan/Eval programs portion of the function and are in fact performing redundant inspections.

When these two inspections evaluate the same area, a signal is being sent to the unit that the area must be one of importance to deserve double inspection. In this case, the area in question is the programs portion of the Stan/Eval function, and the units have received the signal clearly. This might explain why the majority of the units spend an inordinate amount of time preparing for the programs portion of the Formal Visit and expend relatively little time preparing for the aircrew performance portion of the visit. The problem develops because the programs, those 11 subareas, were instituted to support the Stan/Eval charter of measuring the product quality of unit training programs, but they have become the "program" itself. They are only the tools the Stan/Eval function uses to advise the commander on how capable the aircrews are at performing the unit mission; and as tools, they are important because they allow unit Stan/Eval to do the job more efficiently. But the goal is not to have good tools. The goal is to have aircrews who can perform their mission well because, in part, of the managerial tools that make up the Stan/Eval programs.

Two possible ways come to mind that could help redirect this emphasis on the programs portion of the Stan/Eval function. One method is to change the rating system for the 11 subareas that make up the Stan/Eval programs. Presently, some

of them are rated on a Sat/Unsat scale, some Sat/Mar/Unsat, and the rest on the standard five tier (Unsat to Outstanding) scale. If the two tier (Sat/Unsat) rating scale was used for all subareas, units would be less inclined to expend extra time pumping up a subarea that could be rated no higher than Sat. But if this is true, why do some units retype 90 percent of the AF Forms 8? The best this area can be rated is satisfactory. The reason units spend this amount of time and resources is because they know the Stan/Eval team is going to look at every one of the forms that have been generated since the last Formal Visit, and the results are going to be distributed to every unit in the command. Consequently, changing the rating system will not change the emphasis units place on the programs portion of the Stan/Eval function. However, eliminating one of the two redundant inspections does seem to offer some deemphasis on excessive polishing of the Stan/Eval tools.

RECOMMENDATIONS AND RATIONALE

In July 1985, TAC/DOO conducted a TAC-Gained Fighter/Reconnaissance Inspection Review and concluded that the MEI and Formal Visit should be combined for TAC-gained units.(11:1) For many of the same reasons listed in this paper, the conference recommended that, in essence, one of the two inspections of the Stan/Eval programs portion of the function be dropped. This proposal has since been incorporated in the TACR 60-2 and is certainly one possible solution to the problem of redundant evaluations for all TAC units. For reasons listed below, the recommendation of this study is to cut the Stan/Eval programs portion of the Formal Visit and leave the MEI as is. In other words, conduct the Formal Visit on the same, existing frequency, but base the unit rating strictly on the aircrew performance portion of the evaluation.

1) The MEI is perfectly capable of evaluating the programs portion of the function. The IG is set up to inspect management functions. Empirical data validates their ability to reach the same conclusions as the Stan/Eval team.

2) The programs portion of the function is no more important than the training, scheduling, or weapons and tactics functions and as such deserves no more headquarters scrutiny.

3) Eliminating the programs from the Formal Visit inspection requirements would reduce the efforts of Stan/Eval personnel in performing counterproductive work. By definition, SEFEs are "the most highly qualified and

experienced instructor personnel available."(3:3-2) Freeing them from the "massive effort" preparation requirements of a Formal Visit makes them more available to perform instructor duties.

4) Last and most important, leaving the evaluation of the Stan/Eval programs to the MEI allows the Formal Visit to concentrate on evaluating aircrew performance--the most critical indicator within the unit. How well the aircrews fly, how well they understand their weapon system, and how well they know the threat are the critical factors. How well the aircrews perform speaks for the efforts spent in training, weapons and tactics, and even the programs portion of Stan/Eval.

The type of aircrew performance seen on the Formal Visit is unique. Not only is aircrew capability calculated in terms such as intercept hack rates, missile shots or bomb scores as the ORI would measure, it is also the result of how well the aircrews planned and briefed the mission and the quality of flight leadership and instruction seen. It is an effective combination of measuring mission capability in an efficient training environment.

The Formal Visit is also unique because it looks at the flight examiners and instructors as they perform their primary SEFE and instructor duties. These people are the core of the unit training programs, and the quality of their efforts is a key determinant in the unit's mission capability. The Formal Visit should expand the flying activities to include not only evaluations for every SEFE but each instructor as well. This may not be possible in training units where the number of instructors is high, but the instructor and SEFE roles are critical and deserve this level of attention in the operational units where it is possible.

One last recommendation is the use of the informal visits by HQ TAC and NAF SEFEs. Part of the credit for the high quality of unit Stan/Eval programs across the command must go to the fact that double inspection keeps pressure on the units to maintain the quality of their programs. Drop one of the inspections and the pressure drops correspondingly. Periodically, these headquarters SEFEs conduct informal visits in order to give required flight evaluations to unit Chiefs of Stan/Eval. The SEFEs also have training and check ride requirements of their own. On these visits, the SEFEs need to perform some of the standardization portions of their duties by looking at the Stan/Eval programs. The informal visit procedures are adequately described in TACR 60-2, Vol. I, but with the programs portion of the Formal Visit being deleted as an evaluation item, SEFEs will need to increase the use of this standardization tool to ensure program quality remains high.

CONCLUSION

Present TAC inspection policy requires evaluation of the programs portion of the unit Stan/Eval function by both the Formal Visit and the MEI. These inspections are redundant, and units are spending an inordinate amount of time preparing for them. The IG's ability to rate the function has proven to be very accurate. It is the recommendation of this paper that the Stan/Eval programs be dropped as an evaluation item on the Formal Visit. The aircrew performance portion will determine the overall unit rating and should be expanded to include evaluations for all unit SEFE and instructor personnel. Informal visits by headquarters SEFEs should include spot checks of unit programs to ensure quality remains high.

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